

Student Name: _____

Score: _____

Derivatives using Power Rule

Find the derivatives using power rule:

$$y = 10x^3$$

$$y = \frac{1}{2}x^{-2}$$

$$y = \frac{1}{2\sqrt{x}}$$

$$y = 3x^{\frac{-1}{15}}$$

$$y = 8x^6 + 2x^{17}$$

$$y = \sqrt[5]{x}$$

$$y = x^{\frac{1}{31}} + x^{\frac{-1}{7}}$$

$$y = 2x^{12} + 6x^7 + x^4$$

$$y = \frac{5}{3}x^3 - \frac{7}{6}x^6 + \frac{6}{4}x^8$$

$$y = \frac{1}{2}x^{\frac{3}{2}} - \frac{22}{7}x^{\frac{-5}{2}} + x^{\frac{3}{7}}$$

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Derivatives using Power Rule

Find the derivatives using power rule:

$$y = \frac{8x^5 + 4x^4}{2x^2}$$

$$y = \frac{15x^7 + 21x^5 + 12x^3}{3x}$$

$$y = \frac{-22x^{-5} - 17x^{-11}}{21x^{-4}}$$

$$y = \frac{2x^{\frac{11}{3}} + 4x^{\frac{5}{4}} - 3x^{\frac{7}{2}}}{4x^{\frac{2}{3}}}$$

$$y = \frac{7x^2 + 5x^9}{4x^7}$$

$$y = \frac{\sqrt{x} - \sqrt[3]{x}}{\sqrt[5]{x}}$$

$$y = \frac{5x^{-45} + 15x^{-4} - 5x^{-17}}{5x^{-2}}$$

$$y = \frac{5x^2 + 12x^{-5}}{\sqrt{x}}$$

$$y = \frac{\frac{2}{7}x^{\frac{-5}{11}} + \frac{16}{7}x^{\frac{-12}{11}}}{x^{\frac{-21}{11}}}$$

$$y = \frac{x^{\frac{7}{3}} + x^{\frac{10}{3}}}{\sqrt[3]{x}}$$